

Calculation Methods for Grains/Breads Servings in the Summer Food Service Program

This guidance applies to the U.S. Department of Agriculture's (USDA) meal patterns for the Summer Food Service Program (SFSP). To credit as the grains/breads component, grain products and recipes must be whole grain, enriched, or contain a blend of whole and enriched grains. Bran and germ credit the same as enriched and whole grains. Cooked and ready-to-eat (RTE) breakfast cereals must be whole grain, enriched, or fortified. For additional guidance on the SFSP meal pattern and crediting requirements for the grains/breads component, review the CSDE's resource, [Requirements for the Grains/Breads Component of the SFSP Meal Patterns](#), and visit the "SFSP Meal Patterns" and "Grains/Breads Component for the SFSP" sections of the CSDE's SFSP webpage.



The SFSP meal patterns require one serving of the grains/breads component at breakfast, lunch, and supper. One serving of the grains/breads component may be offered as one of the two required snack components. The USDA allows two methods for determining the SFSP grain servings of creditable grain products and recipes.

- Method 1 is used for commercial grain products, and may also be used for standardized recipes that indicate the weight of the prepared (cooked) serving.
- Method 2 is used for standardized recipes and may also be used for commercial grain products that have a product formulation statement (PFS) stating the weight of creditable grains per serving.



SFSP sponsors may use either method, but must document how the crediting information is determined for each grain product and recipe (see "[Choosing a Calculation Method](#)"). For some commercial products, method 2 is required (see "[When Method 2 is Required for Commercial Products](#)").

SFSP sponsors are not required to use these methods for commercial products that have a Child Nutrition (CN) label. CN-labeled products credit based on the stated crediting information for grain ounce equivalents. CN labels are available only for main dish entrees that contribute to the meat/meat alternates component, such as pizza, breaded chicken nuggets, and cheese ravioli. However, CN labels usually include the crediting information for grains, vegetables, and fruits that are part of the product. The USDA's [Authorized Labels and Manufacturers](#) webpage lists approved CN-labeled products and manufacturers. For more information, review the CSDE's resource, [Child Nutrition \(CN\) Labeling Program](#).

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Method 1: Serving Size Chart (Weights or Volumes)

Method 1 uses the USDA's chart, [Exhibit A: Grain Requirements for Child Nutrition Programs](#) (Exhibit A) to determine the required weight (groups A-F) or volume (groups H-I) for the appropriate grain group. The required amounts for the grains component are not the same for all Child Nutrition Programs. The CSDE's handout, [Servings for Grains/Breads in the SFSP](#), lists the Exhibit A grain ounce equivalents that apply to the SFSP.

The amount of a grain food that provides one grain serving varies because different types of foods contain different amounts of creditable grains. For example, to provide one serving of the grains/breads component, a whole-wheat roll (group B) must weigh 25 grams (0.8 ounce), a blueberry muffin (group D) must weigh 50 grams (1.8 ounces), and a granola bar must weigh 53 grams (2.2 ounces). The minimum creditable amount is $\frac{1}{4}$ serving.

- **Groups A-G (baked goods):** Baked goods (such as crackers, breads, rolls, taco shells, muffins, waffles, pancakes, and grain-based desserts, e.g., cookies, cake, granola bars, and pastries) require 14.75 grams of creditable grains to credit as one serving of the grains/breads component. The amount that provides one serving varies from 20 grams (0.7 ounces) for foods in group A to 115 grams (4 ounces) for foods in group G.
- **Group H (cereal grains):** Pasta, cooked breakfast cereals, and cereal grains (such as amaranth, barley, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat) require $\frac{1}{2}$ cup cooked or 25 grams dry to credit as one serving of the grains/breads component. Cereal grains typically credit based on the cooked serving. For guidance on the crediting and serving size requirements for cooked breakfast cereals, review the CSDE's resource, [Crediting Breakfast Cereals in the SFSP](#).

Dry cereal grains used as an ingredient in a recipe (such as rolled oats in bread) credit the same as groups A-G; they require 14.75 grams of creditable grains to credit as one serving.

- **Group I (RTE breakfast cereals):** RTE breakfast cereals require 1 ounce (28 grams) or $\frac{3}{4}$ cup (whichever is less) to credit as one serving of the grains/breads component. If the appropriate volume of cereal weighs less than 28 grams, it still credits as one serving. For example, $\frac{3}{4}$ cup of cereal that weighs 26 grams credits as one serving. For guidance on the crediting and serving size requirements for RTE breakfast cereals, review the CSDE's resource, [Crediting Breakfast Cereals in the SFSP](#).

The USDA's Exhibit A chart (method 1) applies to all creditable commercial grain products. SFSP sponsors may also use method 1 for grain recipes that indicate the **weight** of the prepared (cooked)

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serving. If the recipe does not provide this information, the SFSP sponsor must determine the average weight per serving. For more information, review the CSDE's form, [Yield Study Data Form for Child Nutrition Programs](#).

Online Calculation Tool for Method 1

The USDA's online [Exhibit A Grains Tool](#) helps menu planners determine a product's grain servings, and the required amount to obtain a specific meal pattern contribution. For more information, watch the USDA's webinars, [Exhibit A Grains Tool to the Rescue](#) and [How to Maximize the Exhibit A Grains Tool](#).

Method 2: Creditable Grains

Method 2 determines the SFSP meal pattern serving size of grain products and recipes by calculating the total weight (grams) of creditable grains (whole grains, enriched grains, bran and germ) per manufacturer's serving or recipe serving. To credit as one serving of the grains/breads component, foods in groups A-G of the USDA's Exhibit A chart must contain 14.75 grams of creditable grains, and foods in group H must contain 25 grams of creditable grains.

- **Commercial products:** SFSP sponsors must obtain a manufacturer's product formulation statement (PFS) stating the weight of all creditable grains. This information cannot be determined from the product's Nutrition Facts label or packaging. For more information, review the CSDE's resources, [Product Formulation Statements](#) and [Accepting Processed Product Documentation in the SFSP](#), and the USDA's handouts, [Product Formulation Statement for Grains/ Breads](#), [Sample Completed Product Formulation Statement for Grains/ Breads](#) and [Tips for Evaluating a Manufacturer's Product Formulation Statement](#). For additional guidance on documentation for commercial products, visit the "[Crediting Commercial Processed Products in the SFSP](#)" section of the CSDE's SFSP webpage.
- **Foods made on site:** SFSP sponsors must determine the amount of creditable grains per serving from the weights of each grain ingredient in the standardized recipe. If the recipe lists grain ingredients by volume (e.g., cups or quarts), the SFSP sponsor must calculate the equivalent weight (grams) for each grain ingredient (see "[Method 2 calculation for recipes listing the volume of grain ingredients](#)"). For information on crediting recipes, visit the "[Crediting Foods Prepared on Site in the SFSP](#)" section of the CSDE's SFSP webpage.

For guidance on identifying creditable grains, review the CSDE's resources, [Crediting Whole Grains in the SFSP](#) and [Crediting Enriched Grains in the SFSP](#). For additional guidance, visit the "[Crediting Commercial Processed Products in the SFSP](#)" section of the CSDE's SFSP webpage.

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When Method 2 is Required for Commercial Products

There are some situations when SFSP sponsors must use method 2 to determine the grains/breads servings of commercial grain products. For each situation below, SFSP sponsors must obtain a PFS from the manufacturer.

1. **Multiple creditable grains:** A creditable grain is not the first ingredient (excluding water), but the product contains more than one creditable grain. SFSP sponsors must obtain a PFS from the manufacturer stating that the **combined weight** of all creditable grains is more than the weight of the first ingredient, excluding water. For example, the yellow corn flour in the product below is not a creditable grain because it is not whole grain, enriched, or nixtamalized. To credit in SFSP meals and snacks, the product's PFS must indicate that the combined weight of the two whole grains (whole-wheat flour and rolled oats) is more than the weight of the yellow corn flour (noncreditable grain).
 - Ingredients: *Yellow corn flour*, *whole-wheat flour*, sugar, *rolled oats*, wheat gluten. Contains 2% or less of each of the following: honey, salt, *oat bran*, yeast, molasses.

Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline (slaked lime) solution. If the product's PFS indicates that cornmeal or corn flour are nixtamalized, these ingredients are whole grain. For more information, review the CSDE's resource, [*Crediting Whole Grains in the SFSP*](#).

2. **Combination foods:** A commercial combination food contains a grain portion from groups A-I of the USDA's Exhibit A chart. Examples include pizza crust in pizza, noodles in lasagna, and baked chicken coated with Breadcrumbs or crushed cereal flakes. SFSP sponsors must obtain a PFS from the manufacturer stating the amount of creditable grains in the **grain portion** of the product.
3. **Manufacturer's crediting claim:** The manufacturer claims that a commercial grain product can provide the minimum creditable grains using a serving that is less than the minimum weight or volume listed in the USDA's Exhibit A chart.
4. **Product not listed in Exhibit A:** A commercial product is not listed in any of the nine groups of the USDA's Exhibit A chart. The product's PFS must indicate crediting information.

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5. **Different crediting:** The SFSP sponsor wants to credit a commercial product differently from the serving size listed in the USDA's Exhibit A chart.

These situations require a PFS that indicates the amount of creditable grains per serving, and demonstrates how the product provides that amount according to the USDA's regulations, guidance, or policy. SFSP sponsors must verify the accuracy of the product's PFS prior to including the product in reimbursable meals and snacks, and must maintain all crediting documentation on file. The CSDE will review this information during the Administrative Review of the SFSP.

If the manufacturer will not supply a PFS, or the PFS does not provide the appropriate documentation, the product cannot credit as the grains/breads component in SFSP meals and snacks.

Sample Calculations for Commercial Products in Groups A-G

Table 1 shows a sample calculation using method 1 to determine the SFSP grains/breads servings for a commercial whole-wheat pancake product in group C. Table 2 shows a sample calculation for this same product using method 2. Each method results in a different crediting contribution for this product.

- Using method 1, one pancake credits as 1½ servings of the grains/breads component.
- Using method 2, one pancake credits as 2 servings of the grains/breads component.

For some products, each method results in the same crediting contribution. SFSP sponsors may use either method, but must document how the crediting information was determined (see "[Choosing a Calculation Method](#)").

To determine the meal pattern contribution of a commercial grain product using method 1, menu planners must use the weight (ounces or grams) of one serving from the product's Nutrition Facts label or PFS. If the product lists ounces and grams, menu planners may choose to use either one. To convert ounces to grams, multiply ounces by 28.35.



Calculation Methods for Grains/Breads Servings in the SFSP

Table 1. Using method 1 (USDA's Exhibit A chart) to calculate the SFSP grains/breads servings for commercial products in groups A-G

Mini Whole-Wheat Pancakes

Manufacturer's serving size:
5 pancakes (1.75 ounces)

Group C (USDA's Exhibit A chart):
One serving = 31 grams or 1.1 ounces

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

1. List the weight of the **manufacturer's serving** from the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).

A **1.75** ounces

2. List the required weight for **one grains/breads serving** for the product's group (A-G) in the USDA's Exhibit A chart. ¹

B **1.1** ounces

3. Determine the **grains/breads servings** in one serving of the product: Divide A by B.

C **1.59** grains/breads servings
per manufacturer's
serving

4. Round **down** the number in C to the **nearest ¼ grains/breads serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

D **1.5** grains/breads
servings per
manufacturer's
serving (rounded)

Crediting: The manufacturer's serving size (five mini-pancakes) provides 1½ servings of the grains/breads component.

¹ Calculations use the required weights for groups A-G in the USDA's Exhibit A chart. For more information, review the CSDE's resource, [Servings for Grains/Breads in the SFSP](#).

Calculation Methods for Grains/Breads Servings in the SFSP

Table 2. Using method 2 (creditable grains) to calculate the SFSP grains/breads servings for commercial products in groups A-G

Mini Whole-Wheat Pancakes

Manufacturer's serving size:

5 pancakes (1.75 ounces)

Group C (USDA's Exhibit A chart):

One serving = 31 grams or 1.1 ounces

Creditable grains per serving (from product's PFS):

Whole-wheat flour: 16 grams

Enriched flour: 14 grams

Noncreditable grains: 0 grams

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

1. List the **combined weight (grams)** of whole and enriched grains in one serving from the product's PFS (1 ounce = 28.35 grams). ¹

16 grams of whole-wheat flour +
14 grams of enriched flour =
30 grams of creditable grains

A	30 grams
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2. Determine the **grains/breads servings** in one serving of the product: Divide A by 14.75 (14.75 grams of creditable grains = one grains/breads serving for groups A-G).

B	2.03 grains/breads servings per manufacturer's serving
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3. Round **down** the number in B to the **nearest ¼ grains/breads serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

C	2 grains/breads servings per manufacturer's serving (rounded)
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Crediting: The manufacturer's serving size (five mini-pancakes) provides 2 servings of the grains/breads component.

¹ To credit a commercial product using method 2, SFSP sponsors must obtain a PFS from the manufacturer. For information on PFS forms, review the CSDE's resources, [Product Formulation Statements](#) and [Accepting Processed Product Documentation in the SFSP](#); the USDA's handouts, [Product Formulation Statement for Grains/Breads](#), [Sample Completed Product Formulation Statement for Grains/Breads](#) and [Tips for Evaluating a Manufacturer's Product Formulation Statement](#); and visit the [Crediting Commercial Processed Products in the SFSP](#) section of the CSDE's SFSP webpage.

Calculation Methods for Grains/Breads Servings in the SFSP

Sample Calculations for Commercial Products in Group H

Table 3 shows a sample calculation using method 1 to determine the SFSP grains/breads servings for a commercial whole-grain pasta product in group H. Table 4 shows a sample calculation for this same product using method 2.

Each method results in a different crediting contribution for this product. For some products, each method results in the same crediting contribution. SFSP sponsors may use either method 1 or 2, but must document how the crediting information was determined (see “[Choosing a Calculation Method](#)”).

Cereal grains in group H typically credit based on the **cooked** serving, i.e., $\frac{1}{2}$ cup of cooked cereal credits as one serving of the grains/breads component. However, the menu planner may choose to calculate the product’s grain servings based on the **dry uncooked weight**, i.e., 1 ounce of dry cereal grains credits as one grain serving. The menu planner must determine the weight (ounces or grams) of one serving from the commercial product’s Nutrition Facts label or the manufacturer’s PFS. If the product lists ounces and grams, the menu planner may choose to use either one.



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Table 3. Using method 1 (USDA's Exhibit A chart) to calculate the SFSP grains/breads servings for commercial products in group H

Whole-grain Pasta

Manufacturer's serving size:

32 grams (½ cup cooked)

Group H (USDA's Exhibit A chart):

One serving = ½ cup cooked or 25 grams dry

Ingredients: Whole grain durum wheat flour.

1. List the weight of the **manufacturer's serving** from the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).

A	32 grams
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2. List the required **uncooked (dry) weight** for one grains/breads serving for group H in the USDA's Exhibit A chart. ¹

B	25 grams
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3. Determine the **grains/breads servings** in one serving of the product: Divide A by B.

C	1.28 grains/breads servings per manufacturer's serving
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4. Round **down** the number in C to the nearest ¼ **grains/breads serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

D	1.25 grains/breads servings per manufacturer's serving (rounded)
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Crediting: The manufacturer's serving size (½ cup cooked) provides 1¼ servings of the grains/breads component.

¹ Calculations use the required weight for group H in the Exhibit A chart. Group H requires ½ cup cooked or 25 grams dry to provide one serving of the grains/breads component. For more information, review the CSDE's resource, [Servings for Grains/Breads in the SFSP](#).

Calculation Methods for Grains/Breads Servings in the SFSP

Table 4. Using method 2 (creditable grains) to calculate the SFSP grains/breads servings for commercial products in group H

Whole-grain Pasta

Manufacturer's serving size:

32 grams (½ cup cooked)

Group H (USDA's Exhibit A chart):

One serving = ½ cup cooked or 25 grams dry

Creditable grains per serving (from product's PFS):

Whole-wheat flour: 15 grams

Enriched flour: 14 grams

Noncreditable grains: 0 grams

Ingredients: Whole grain durum wheat flour.

1. List the **combined weight (grams)** of whole and enriched grains in one serving (½ cup) from the product's PFS (1 ounce = 28.35 grams).¹

15 grams of whole-wheat flour +
14 grams of enriched flour =
29 grams of creditable grains

A **29** grams

2. Determine the **grains/breads servings** in one serving of the product: Divide A by 25 (25 grams of creditable grains = one grains/breads serving).

B **1.16** grains/breads servings
per manufacturer's
serving

3. Round **down** the number in B to the nearest ¼ **grains/breads serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

C **1** grains/breads
servings per
manufacturer's
serving (rounded)

Crediting: The manufacturer's serving size (½ cup cooked) provides one serving of the grains/breads component.

¹ To credit a commercial product using method 2, SFSP sponsors must obtain a PFS from the manufacturer. For information on PFS forms, review the CSDE's resources, [Product Formulation Statements](#) and [Accepting Processed Product Documentation in the SFSP](#); the USDA's handouts, [Product Formulation Statement for Grains/ Breads](#), [Sample Completed Product Formulation Statement for Grains/ Breads](#) and [Tips for Evaluating a Manufacturer's Product Formulation Statement](#); and visit the [Crediting Commercial Processed Products in the SFSP](#) section of the CSDE's SFSP webpage.

Calculation Methods for Grains/Breads Servings in the SFSP

Choosing a Calculation Method

For some commercial grain products, methods 1 and 2 may result in a different crediting contribution. For example, a 1-ounce bagel might credit as one serving using method 1 (USDA's Exhibit A chart), but might credit as 1½ servings using method 2 (creditable grains). SFSP sponsors may choose to use either method for all foods in the USDA's Exhibit A chart, but must document which method is used for each product.

SFSP sponsors should use the same calculation method each time the same product is on the menu. For example, if the SFSP sponsor uses method 2 to determine the crediting of a whole-grain bagel, that same bagel should always be credited using method 2.

The CSDE strongly recommends choosing one calculation method for consistent crediting. This simplifies menu planning and assists SFSP sponsors with documenting compliance with the meal pattern requirements for the grains/breads component.

Using Method 1 (Exhibit A chart)

To use the USDA's Exhibit A chart for commercial products, SFSP sponsors must have the product's Nutrition Facts label or PFS indicating the weight (ounces or grams) of the manufacturer's serving. To use the USDA's Exhibit A chart for foods made on site, SFSP sponsors must have a standardized recipe that indicates the weight of the prepared serving of the recipe after cooking or baking. Many recipes do not provide this information. If the recipe does not list the serving weight, the SFSP sponsor must determine the average weight per serving by weighing several servings of the recipe. For more information, review the CSDE's form, [Yield Study Data Form for Child Nutrition Programs](#).

Using Method 2 (creditable grains)

To use method 2 for commercial products, SFSP sponsors must obtain a PFS from the manufacturer that documents the weight of all creditable and noncreditable grains per serving (see "[Method 2: Creditable Grains](#)"). To use method 2 for foods made on site, SFSP sponsors must have a standardized recipe that indicates the weight of each creditable and noncreditable ingredient. For assistance with recipe calculations, such as converting fractions to decimals, review the ICN's [Basics at a Glance Portion Control Poster](#) and the decimal equivalents of fractions in the "[Introduction](#)" section of the USDA's FBG. If the recipe is not standardized and lists only the volume of grain ingredients, SFSP sponsors must calculate the weight equivalent (grams) of each grain ingredient (see "[Method 2 calculation for recipes listing the volume of grain ingredients](#)").

Calculation Methods for Grains/Breads Servings in the SFSP

Sample Calculations for Foods Made on Site

SFSP sponsors must have standardized recipes on file to document the meal pattern contribution of grain foods prepared on site, such as breads, rolls, muffins, pizza dough, and pancakes. The SFSP grains/breads servings in one serving of a recipe are determined using the appropriate weight (groups A-G) or volume (groups H-I) in the USDA's Exhibit A chart (method 1), or the weight of creditable grains per serving (method 2). For more information, see "[Using Method 1 \(Exhibit A chart\)](#)" and "[Using Method 2 \(creditable grains\)](#)."



The CSDE encourages SFSP sponsors to use method 2 for recipes in groups A-G because it provides more accurate crediting information. Foods in group H (cereal grains such as rice and pasta) typically credit based on the cooked serving, i.e., $\frac{1}{2}$ cup credits as one serving.

SFSP sponsors do not need to calculate grains/breads servings for foods prepared from the USDA's recipes for Child Nutrition Programs. These standardized recipes specify the meal pattern crediting information per serving. For links to the USDA's recipes, visit the Institute of Child Nutrition's (ICN) [Child Nutrition Recipe Box](#) and the "[Recipes](#)" section of the CSDE's [Menu Planning for Child Nutrition Programs](#) webpage. For information on standardized recipes, visit the [Crediting Foods Prepared on Site in the SFSP](#) section of the CSDE's SFSP webpage.

Method 2 calculation for recipes listing the weight of grain ingredients

Table 5 shows how to use method 2 to calculate the SFSP grains/breads servings for a standardized recipe that lists the weight of grain ingredients. Foods in groups A-G must contain 14.75 grams of creditable grains per recipe serving to credit as one serving of the grains/breads component. One serving of this recipe credits as $\frac{3}{4}$ serving of the grains/breads component.

Calculation Methods for Grains/Breads Servings in the SFSP

Table 5. Using method 2 (creditable grains) to calculate the grains/breads servings for recipes listing the weight of grain ingredients

WGR standardized recipe for multi-grain bread

Yield: 100 servings

Serving size: 1 piece

Grain ingredients:

Whole-wheat flour: 8 ounces (0.5 pound)

Rolled oats: 1 pound 2 ounces (1.125 pounds)

Enriched flour: 1 pound

Enriched cornmeal: 8 ounces (0.5 pound)



1. Determine the **total weight (pounds)** of all creditable grains in the recipe (16 ounces = 1 pound). Convert fractions to decimals, e.g., $1\frac{3}{4}$ pounds equals 1.75 pounds.

1.625 pounds of whole grains (whole-wheat flour and rolled oats) +

1.5 pounds of enriched grains (enriched flour and enriched cornmeal) =

3.125 pounds of creditable grains

A

3.125

pounds of creditable grains

2. Determine the **total grams of creditable grains** in the recipe: Multiply A by 453.6 (1 pound = 453.6 grams).

B

1417.5

grams of creditable grains

3. List the **number of servings** in the recipe.

C

100

servings per recipe

4. Determine the **grams of creditable grains** per recipe serving: Divide B by C.

D

14.175

grams of creditable grains per recipe serving

5. Determine the **grains/breads servings** per recipe serving: Divide D by 14.75 (One grains/breads serving = 14.75 grams of creditable grains).

E

0.96

grains/breads servings

6. Round **down** the number in E to the **nearest $\frac{1}{4}$ serving**. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

F

0.75

grains/breads servings (rounded)

Crediting: The recipe's serving (one piece) provides $\frac{3}{4}$ serving of the grains component

Calculation Methods for Grains/Breads Servings in the SFSP

Method 2 calculation for recipes listing the volume of grain ingredients

To determine the grains/breads servings of a recipe using method 2, SFSP sponsors must first convert the volume (e.g., cups and quarts) of each grain ingredient to weight (grams). SFSP sponsors may use any of the methods below for this calculation.

- Use the manufacturer's serving size information on the Nutrition Facts label for the grain ingredient, such as whole-wheat flour, enriched flour, or whole-grain cornmeal. For example, a recipe contains 2 cups of whole-grain flour. The product's Nutrition Facts label states that $\frac{1}{4}$ cup of whole-grain flour weighs 32 grams. Multiply the weight of the manufacturer's serving (30 grams) by the amount of the ingredient used in the recipe (2 cups) to determine the weight of the ingredient used in the recipe (256 grams).
- Search the USDA's [FoodData Central](#) nutrient database for grain ingredients, such as whole-wheat flour or yellow cornmeal. Enter "1" in the data field for the cup measurement, and the database will provide the weight of 1 cup of that ingredient.
- Use volume equivalent charts that list the weight of 1 cup of grain ingredients. Table 6 shows the weight per cup for some commonly used grain ingredients.
- Determine the average weight of 1 cup of the grain ingredient by measuring and weighing several samples. For more information, review the CSDE's [Yield Study Data Form for Child Nutrition Programs](#).

Table 7 shows how to use method 2 to calculate the SFSP grains/breads servings for a recipe that lists only the volume (cups) of grain ingredients.



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Table 6. Weights of 1 cup of commonly used grain ingredients ¹

Food item	Weight (grams) per cup
Barley, flour or meal ²	148
Barley, hulled ²	184
Barley, pearled, uncooked ²	200
Barley, pearled, cooked ²	157
Breadcrumbs, dry, grated, plain ²	108
Breadcrumbs, plain, dry, grated, seasoned ²	120
Breadcrumbs, plain soft, white ²	45
Bulgur, uncooked ²	140
Bulgur, cooked ²	182
Cereal, General Mills Cheerios ³	28
Cereal, General Mills Corn Chex ³	31
Cereal, General Mills Rice Chex ³	27
Cereal, General Mills Wheat Chex ³	47
Cereal, General Mills Wheaties ³	36
Cereal, Kellogg's All-Bran Bran Buds ⁴	90
Cereal, Kellogg's All-Bran Original ⁴	62
Cereal, Kellogg's Corn Flakes crumbs ⁴	88
Cereal, Kellogg's Corn Flakes, whole ⁴	28
Cereal, Kellogg's Rice Krispies ⁵	26
Cereal, Quaker Puffed Rice ⁵	14
Cereal, Quaker Puffed Wheat ⁵	28
Cornmeal, enriched, uncooked, yellow, degerminated ²	157
Cornmeal, enriched, uncooked, yellow, whole grain ²	122
Cracker crumbs, graham, crushed ²	84
Cracker crumbs, snack, standard snack-type, regular, crushed ²	52

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Table 6. Weights of 1 cup of commonly used grain ingredients ¹ , <i>continued</i>	
Food item	Weight (grams) per cup
Flour, buckwheat, whole groats ²	120
Flour, corn, whole grain, yellow ²	117
Flour, rice, brown ²	158
Flour, rice, white ²	158
Flour, rye, dark ²	128
Flour, rye, light ²	102
Flour, wheat, white, all-purpose enriched, bleached ²	125
Flour, wheat, white, all-purpose enriched, unbleached ²	125
Flour, wheat, white, bread, enriched ²	137
Flour, wheat, white, cake, enriched, unsifted, dipped ²	137
Flour, wheat, white, self-rising, enriched ²	125
Flour, wheat, whole grain ²	120
Wheat germ, uncooked, plain ²	88
Wheat germ, toasted, plain ²	115
Oat bran, raw ²	94
Oat bran, cooked ²	219
Oats, rolled, quick, uncooked ²	81
Oats, rolled, regular, uncooked ²	81
<p>¹ The use of brand-name products is solely for clarification regarding serving sizes and does not constitute approval or endorsement by the USDA or CSDE. The actual weight of 1 cup may be more or less than the weights in this chart, depending on the measuring method used, e.g., stirred or unstirred, sifted or unsifted, spooned or dipped, and coarsely or finely crushed. For the most accurate conversion of volume to weight, calculate the average weight of 1 cup of the ingredient by measuring and weighing several samples. For more information, review the CSDE's Yield Study Form.</p> <p>² USDA's FoodData Central database (Standard Reference (SR) Legacy Data): https://fdc.nal.usda.gov/</p> <p>³ General Mills Cereals: https://www.generalmills.com/en/Brands/Cereals</p> <p>⁴ Kellogg's Cereals: https://www.kelloggs.com/en_US/home.html</p> <p>⁵ Quaker Cereals: https://www.quakeroats.com/products</p>	

Calculation Methods for Grains/Breads Servings in the SFSP

Table 7. Using method 2 (creditable grains) to calculate the grains/breads servings for recipes listing the volume of grain ingredients

Multi-grain bread

25 servings		Convert cups to grams	
Grain ingredient	Measure	Grams per cup ¹	Weight (grams)
Whole-wheat flour	2 cups	X 120 =	240.00 grams
Rolled oats ²	$\frac{3}{4}$ cup	X 181 =	60.75 grams
All-purpose enriched flour	2 cups	X 125 =	250.00 grams
Enriched cornmeal	$\frac{1}{4}$ cup	X 138 =	34.50 grams
Total weight of creditable grains:			585.25 grams

- Determine the **combined weight (grams)** of all creditable grains in the recipe.
300.75 grams of whole grains (whole-wheat flour and rolled oats) + 284.5 grams of enriched grains (all-purpose enriched flour and enriched cornmeal) = 585.25 grams of creditable grains

A **585.25** grams

- List the **number of servings** in the recipe.

B **25** servings per recipe

- Determine the **grams of creditable grains** per serving: Divide A by B.

C **23.41** grams

- Determine the **grains/breads servings** per recipe serving: Divide C by 14.75 (one grains/breads serving = 14.75 grams of creditable grains). ²

D **1.59** grains/breads servings

- Round **down** the number in D to the **nearest $\frac{1}{4}$ serving**. For example, 1.49 and 1.27 round down to 1.25, and 1.24 rounds down to 1.

E **1.5** grains/breads servings (rounded)

Crediting: The recipe's serving (one piece) provides 1½ servings of the grains component.

¹ The grams per cup are from the USDA's [FoodData Central](#) database (Standard Reference (SR) Legacy Data).

² Dry cereal grains used as an ingredient in a recipe (such as rolled oats in bread) credit the same as groups A-G; 14.75 grams of creditable grains credit as one serving of the grains/breads component.

Calculation Methods for Grains/Breads Servings in the SFSP

Resources

Accepting Processed Product Documentation in the SFSP (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/CreditingSFSP/AcceptDocumentationSFSP.pdf>.

Basics at a Glance Portion Control Poster (Institute of Child Nutrition):

<https://theicn.org/icn-resources-a-z/basics-at-a-glance/>

Calculation Methods for Crediting Grains/Breads in the SFSP (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/CreditingSFSP/GrainCalculationsSFSP.pdf>

Crediting Breakfast Cereals in the SFSP (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/CreditingSFSP/CreditCerealsSFSP.pdf>.

Crediting Foods in the SFSP (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Summer-Food-Service-Program/Handouts>

Exhibit A: Grain Requirements for Child Nutrition Programs (USDA):

<https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/ExhibitA.pdf>

Food Buying Guide Exhibit A Grains Tool (USDA):

<https://foodbuyingguide.fns.usda.gov/ExhibitATool/Index>

Food Buying Guide for Child Nutrition Programs (USDA):

<https://www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs>

FoodData Central (USDA):

<https://fdc.nal.usda.gov/>

Grains/Breads Component for the SFSP (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Summer-Food-Service-Program/Handouts#GrainsBreads>

How Do They Compare? Child Nutrition Programs' Meal Pattern Requirements (USDA):

<https://portal.ct.gov/-/media/SDE/Nutrition/CNPMealPatternComparison.pdf>

Meal Patterns for the SFSP (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Summer-Food-Service-Program#MealPatterns>

Nutrition Guide: Summer Food Service Program (USDA):

https://fns-prod.azureedge.net/sites/default/files/resource-files/USDA_SFSP_NutritionGuide.pdf

Product Formulation Statement for Documenting Grains/Breads Servings in the Child and Adult Care Food Program, Summer Food Service Program, and NSLP Afterschool Snacks: Completed Sample (USDA): https://fns-prod.azureedge.net/sites/default/files/resource-files/PFS_Samples_Grains_Breads_Servings.pdf

Calculation Methods for Grains/Breads Servings in the SFSP

Product Formulation Statements (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/PFS.pdf>

Requirements for the Grains/Breads Component of the SFSP Meal Patterns (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/CreditingSFSP/ComponentGrainsBreadsSFSP.pdf>

Resources for the SFSP Meal Patterns (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/MealPattern/ResourcesSFSPMealPattern.pdf>

Servings for Grains/Breads in the SFSP (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/MealPattern/GrainsBreadsSFSP.pdf>

USDA Memo SP 34-2019, CACFP 15-2019 and SFSP 15-2019: Crediting Coconut, Hominy, Corn Masa, and Masa Harina in the Child Nutrition Programs:

<https://www.fns.usda.gov/cn/crediting-coconut-hominy-corn-masa-and-masa-harina-child-nutrition-programs>

USDA Memo SP 34-2019, CACFP 15-2019 and SFSP 15-2019: Crediting Coconut, Hominy, Corn Masa, and Masa Harina in the Child Nutrition Programs:

<https://www.fns.usda.gov/cn/crediting-coconut-hominy-corn-masa-and-masa-harina-child-nutrition-programs>

Yield Study Form (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/YieldStudy.pdf>

Calculation Methods for Grains/Breads Servings in the SFSP



For more information, visit the [SFSP Meal Patterns](#) and [Crediting Foods in the SFSP](#) sections of the CSDE's SFSP webpage, or contact the [Summer Meals staff](#) in the CSDE's Bureau of Health/Nutrition, Family Services and Adult Education, 450 Columbus Boulevard, Suite 504, Hartford, CT 06103-1841.

This document is available at <https://portal.ct.gov/-/media/SDE/Nutrition/SFSP/CreditingSFSP/GrainCalculationsSFSP.pdf>.

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- (3) email: program.intake@usda.gov.

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